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# Toward a Framework for Identifying Attitudes and Intentions to Music Acquisition from Legal and Illegal Channels

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## ABSTRACT

Technological developments have had a profound effect on modern music acquisition, allowing people to share music over the Internet for free. The research identifies the antecedents of consumers' attitudes and intentions to acquire music from various channels. The paper reports findings of a structured questionnaire survey of university students in the United Kingdom and Greece ( $n = 511$ ). Using structural equation modeling, the authors conclude that consumers' intention to acquire music via a legal channel is influenced by idolatry (IDL), the perceived quality of music (PQM), the perceived likelihood of punishment (PLP; digital legal channel only), and their subjective norm. On the other hand, intention to acquire music via an illegal channel is influenced by the perceived benefits of piracy. The price of legitimate music was only significant for the illegal street vendor channel, whereas IDL had a positive effect on illegal downloading. Gender had moderating effects on PLP and attitude, and income-moderated attitude and intention from P2P platforms. The findings carry important implications for academic researchers, practitioners, and policymakers. © 2017 The Authors *Psychology & Marketing* Published by Wiley Periodicals, Inc.

*The absolute transformation of everything that we ever thought about music will take place within 10 years and nothing is going to be able to stop it, music is going to be like running water or electricity.*

David Bowie talking to Jon Pareles, reported in the New York Times, 9 June, 2002.

Recent developments have altered cultural and creative industries such as music in unexpected ways (Cho, Liu, & Ho, in press). Compression technologies (mainly MP3<sup>1</sup>) and the Internet changed the way people acquire and consume music. A tipping point was the introduction of file-sharing platform Napster in 1999, which allowed consumers to exchange MP3 files. This was followed by Apple's iPod in 2001, which gave consumers the ability to store their Mp3 music files and travel with them anywhere (Ogden, Ogden, & Long, 2011). Year 2000 saw a decline of 8.7% in global

record sales (Lamont, 2013), preceding decline for traditional bricks and mortar stores that used to sell vinyl records, cassette tapes, and/or CDs. Traditional retail chains such as Tower Records disappeared (Park, 2014), HMV has gone into administration (Bowers & Moulds, 2013). New (legal and illegal) channels allow consumers to efficiently download digital music files (Bockstedt, Kauffman, & Riggins, 2005; Rao, 1999), giving them easy access to music at their fingertips. These changes have resulted in substantial losses for the music industry, making the way that music is consumed an increasingly important issue (Peitz & Waelbroeck, 2004).

The fall in physical sales is nonetheless accompanied by an increase in digital ones. Revenues from physical music sales between 2010 and 2014 decreased by \$823.8 million (39.7%), but digital sales have increased by 1192.3 million (52.7%; International Federation of The Phonographic Industry (IFPI), 2014). In the United Kingdom, the sharp fall in physical sales from 2010 to 2014 (44.1%) has been accompanied by an increase in

<sup>1</sup> The MP3 is a compressed file that contains a piece of music (usually a song) of a quality near to the standards of the original copyrighted equivalent.

digital sales (61.9%). By 2010, illegal digital downloading made up 95% of the global music download market, which explains the decline in music industry physical sales (IFPI, 2014). Worldwide losses to the respective industries are around tens of billions of US dollars (Lysonski & Durvasula, 2008; McKenzie, 2009).

Peitz and Waelbroeck (2004) suggest that the music industry's sharp revenue fall is at least partly attributed to the widespread use of peer-to-peer sites. Peer-to-peer file sharing has been identified as a big challenge for the music industry that tries to achieve ways to eliminate this extensive illegal downloading behavior and to direct music downloaders (or digital consumers) toward paid services.

The music industry has attempted various antipiracy efforts, including partnerships with Internet service providers, educating consumers, and promoting new models of consumption such as pay-per-download and subscription services such as "Spotify" and Apple Music. However, respondents are still admitting to downloading content and streaming illegally (Bold, 2013). Illegal downloaders justify their behavior by asserting that paying is unnecessary and expensive and illegal downloading is easy and convenient, implying that it has become a mainstream cultural norm. Nevertheless, according to Michaels (2009), illegal downloaders are ten times more likely to pay for acquiring legal music contrary to those who do not. This implies that some consumers are probably using more than one channel to obtain music, exhibiting behavior resembling that of a multi-channel customer.

The music industry publicizes the illegality of music piracy in antipiracy campaigns and lobbies to establish laws to prosecute illegal downloaders. Globally, copyright laws have been amended so ISPs can block users from infringement sites (IFPI, 2015) and Web site blocking legislation is being updated. Search engines such as Google are demoting sites where there are multiple removal notices from rights holders (IFPI, 2015). However, such sites are frequently replaced by new pirate ones.

Music piracy remains a major problem for IFPI as digital music piracy evolves into new forms, using platforms such as Tumblr and Twitter, BitTorrent file sharing, and stream ripping and unlicensed cyberlockers (IFPI, 2014). In 2014 there were four billion downloads from BitTorrent alone, mostly infringements of copyright IFPI (2015). Research by NPD in the United States suggests that 27 million people used mobile apps to obtain at least one unlicensed song (IFPI, 2015). The IFPI antipiracy team necessarily responds rapidly to remove infringing links on social media because a single link to an infringing repertoire can, for example, be retweeted more than 27,000 times on Twitter in just 30 minutes (IFPI, 2015).

In the psychology and marketing literature there has been interest in how consumers make complex choice decisions (Bettman, 1979; Schaller & Malhotra 2015; Xie, Bagozzi, & Østli 2013) and in how consumers reject alternative choices (Agarwal & Malhotra, 2005; Botti & Iyengar, 2006; Botti, Orfali, & Iyengar, 2009;

Kahn & Baron, 1995; White, 2005). Many decisions are characterized by trade-offs of risks and benefits (Schaller & Malhotra 2015).

In psychology literature Heider's balance theory (Heider, 1958) demonstrates that unconscious processes can result in stress due to unbalanced associations in the memory (Woodside, 2004) and when these arise, an individual will exercise some mental and physical effort to eliminate tension (Woodside 2001, 2004). So consumers can misrepresent or fabricate their own opinion to achieve a balanced state (Heider 1958 cited in Woodside and Chebat, 2001). So they either begin to like the, for example, product or sell it (Woodside 2001 p. 478). Heider (1958 cited Woodside, 2004) also suggests that there are relationships between units and sentiments, "members of the family being a unit; and a person and his deed belong together" (p. 282). These sentiments are the feelings (positive or negative) toward an entity, for example, person or object. We ultimately want people to like us and have positive sentiments (Heider 1958 cited in Woodside and Chebat, 2001). These triads are related from the perceivers' point of view, although brands have attributes or provide benefits. By a balanced state, it means these triads must fit together harmoniously and then there is no stress toward change. If there is stress then "forces toward state will arise" and if a change is not possible the imbalance produces tension (Heider 1958 cited in Woodside and Chebat, 2001). According to Heider (1958), unbalanced situations lead to further thinking and are felt to have deep psychological meaning full of conflict resulting from these situations (as cited in Woodside, 2004). Heider's balance theory can help us understand how subjective norm and idolatry (IDL) can affect attitudes toward music acquisition. So, for example, if consumers are being supported by those important to them in the way they consume music and/or want to support an artist they like, they are more than likely to achieve a balanced state in downloading legitimately. However, if they feel unsupported by those important to them but are ambivalent to them or do not care for the artist (IDL) they may fabricate their behavior to achieve their own balanced state and justify their behavior or potentially change their behavior.

In the social psychology literature, Bems' self-perception theory (1972) postulates that "the individual's own behavior will be used by him as a course of evidence for his beliefs and attitudes to the extent that more contingencies of reinforcement for engaging in the behavior made more subtle or less discriminable" (p. 8). Self-perception theory has been supported in various studies (Bem, 1972) and real life situations. For example, Brunelle (2001) demonstrated that after teenagers participated in repeated volunteering, their attitudes were demonstrated to have shifted to be more caring and considerate toward others. This demonstrates that subject to engaging in whichever forms of music acquisition, one's own beliefs and attitudes will be reinforced. More specifically the theory suggests "individuals only come to know their own attitudes and internal states by inferring them from observations of their own be-

haviour and circumstances in which the behavior occurs” (Bem, 1972, p. 5).

Although research exists on music acquisition, studies focus almost exclusively on digital music piracy (Al-Rafee & Cronan, 2006; Chen, Pan, & Pan, 2009; Chiou, Cheng, & Huang, 2011; Cronan & Al-Rafee, 2008; Gopal & Marsden 2006; Gopal, Sanders, Bhat-tacharjee, Agrawal, & Wagner, 2004; Kariithi, 2011; Plowman & Goode, 2009; Taylor, 2011; Yoon, 2011) ignoring the antecedents that lead to other channel choices. However, determining such multichannel behavior is critical to help the music industry identify strengths and weaknesses in order to tackle the issue appropriately. If a music pirate shares similarities in behavior with a multichannel customer, examining only the illegal digital music channel will not reveal a clear picture. A multichannel customer tends to spend four times as much money as customers who confine themselves only to one channel (Goel, 2006). Multichannel consumers usually prefer to explore various opportunities to compare products, benefits, prices, and service options, so they may skip from brick-and-mortar stores to the Internet and vice versa in order to find what is best for them (Crawford, 2006). This current study aims to fill the research gap on multichannel music consumption by extending research on consumer choices to determine the psychological factors that influence university students<sup>2</sup> to acquire music from various channels, illegal and legal. Specifically, we address the following three research questions in this study: (1) What is the connection between music acquisition attitudes, subjective norm, perceived behavioral control, and intention? (2) What is the role of perceived benefits of piracy, price of legitimate music, perceived likelihood of punishment (PLP), and IDL in shaping their music acquisition attitudes? (3) What is the moderating effect of key sociodemographic variables such as gender and income?

The following section provides a literature review on music piracy followed by the conceptual model and the research hypotheses. Next, the methodology is explained, and results are presented. The paper concludes with the discussion of the findings, theoretical, managerial, and policy implications together with limitations and propositions for further research.

## **THEORETICAL BACKGROUND AND HYPOTHESES**

### **Music Piracy**

Music piracy is the illegal act of copying music without explicit consent or compensation to the copyright

holder (Gopal et al., 2004). Music piracy has become an important issue in modern society, having a seriously negative effect on the sales and profits of record companies and the royalty incomes of performers and writers (Woolley, 2010). A Google search for “Music piracy” produces over 380,000 results; this includes both physical piracy (the illegal reproduction of hard goods or physical products such as CDs for music, DVDs for films, and other software piracy) and digital piracy (the diffusion of digital cultural products over the Internet mainly through P2P file-sharing networks). “The rise in piracy has been historically linked to the rise in new technologies and platforms for accessing content” (Bold, 2013, p. 63) such as faster broadband, different platforms, smart phones, and tablets. Music is the most popular type of illegally accessed content as well as also being the type of content most frequently paid for.

Historically music piracy research has its roots to anti-counterfeiting research and has been addressed by research highlighting the billions lost globally from the industry (Albers-Miller, 1999; Herstein, Drori, Berger, & Barnes, 2015; Stottinger & Penz, 2015). Most piracy studies that were conducted before the turn of the millennium were based on traditional software piracy of software duplication. There were no early studies dealing with Internet piracy (Hinduja, 2008), which was originally too slow a channel for widespread downloading. Other studies focused on traditional piracy such as photocopying books and duplicating music records initially on cassette tapes and then CDs (Ang, Chen, Lin, & Tambyah, 2001).

The technological advances at the end of the twentieth century spurred digital music piracy research (Al-Rafee & Cronan, 2006; Chiou et al., 2011; Cronan & Al-Rafee, 2008; Gopal et al., 2004; Gopal & Marsden 2006; Kariithi, 2011; Plowman & Goode, 2009; Taylor, 2011; Yoon, 2011). Although physical music piracy existed before digital music piracy, it was on a much smaller scale. Physical piracy still exists mainly through sales of counterfeit CDs from street vendors, although the music industry’s largest challenge is to tackle the growing digital piracy on the Internet.

In digital music piracy literature, there are two main streams of research. The first deals with intention-based theories such as theory of reasoned action (TRA; Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB; Ajzen, 1991) and the second with ethical decision-making. Intention-based theories try to explain individual behavioral intentions using specific psychological factors, such as attitude and subjective norms. On the other hand, ethical decisions studies try also to explain individual behavioral intentions, with the assumption that behavioral intentions are affected by self-ethical choices. Regarding the first strand, all studies agree that attitude is a significant influence to the intention to pirate (Chang, 1998; Chiou, Huang, & Lee, 2005; Kwong & Park, 2008; Wang, Chen, Yang, & Farn, 2009; Yoon, 2011). In ethical decisions literature, Gopal et al. (2004) identified that the intention to swap music online illegally was negatively related to the ethical standards of the individual. Furthermore,

<sup>2</sup> According to IFPI (2016) over one-third of copyright infringement is popular among the 16–24 age group, while the same group is also the one that is currently consuming the most licensed music. This demonstrates that a significant proportion of illegal and legal music consumers belong to the student population. Furthermore, according to the same report 72% believes that music is very important for them, demonstrating the importance of this age group.



Yoon (2011) incorporated ethics in the TPB from a deontological perspective (including moral obligation and justice) and from a teleological perspective<sup>3</sup> (including perceived benefit and risk). Yoon's results show that moral obligation and justice play a negative role on the intention to pirate, while perceived benefit affects positively the intention to pirate and perceived risk affects negatively attitude toward digital piracy (Yoon, 2011).

## Theory of Planned Behavior

The TPB was first developed from the TRA, proposed by Fishbein and Ajzen (1975). The TRA suggests that if impulsive actions are excluded, a person's behavior derives from intention. This intention is produced by attitude over an action and by the subjective norms of the person's social circle. Ajzen (1991) extended the TRA model by adding the variable of "perceived behavioral control," which involves the ease or difficulty a person is facing in order to perform an action. The TPB is based on the premise that one's behavior (in this case music acquisition) is influenced by a set of psychological variables, most importantly intention to perform the behavior, attitude toward the behavior, subjective norms, perceived behavioral control (PBC), and control beliefs (Ajzen, 1991; Schaller & Malhotra 2015). Attitude is defined as an individual's feelings regarding a specific behavior (Ajzen, 2002) where the more positive the attitude, the greater the intention to perform an action. Subjective norms are expectations that arise from the individual's surroundings and can be viewed as social pressures. The greater these perceived pressures to perform a behavior, the more likely it is that people will engage in that behavior (Ajzen, 2002). Last, PBC refers to the person's perception of how easily an action can be performed. People who find a behavior easy and have the means and knowledge to carry it out are more likely to engage in that behavior (Schaller & Malhotra 2015). In the current research setting, in order to proceed to piracy a person needs to have access to the appropriate technology, Internet connection speed, and Internet experiences.

The TPB has been used in the prediction of a wide range of behaviors (Eagly & Chaiken, 1993; Sheppard, Hartwick, & Warshaw, 1988) with strong predictive validity (Ajzen & Fishbein, 1973; Albarracín, Johnson, & Fishbein, 2001). TPB has been extensively used in the context of piracy and counterfeit products (Kwong & Park, 2008; Michaelidou & Christodoulides, 2011; Plowman & Goode, 2009) as well as for online purchase intentions (Amaro & Duarte, 2015; Shim, Eastlick, Lotz, & Warrington, 2001).

The conceptual model for this current study builds upon the typical TPB constructs, extended by five additional antecedents of attitude, namely perceived quality of music (PQM), perceived benefits of piracy, price of legitimate music, PLP, and IDL. Also, gen-

der and income are examined for their moderating effects. Four distinct channels for music acquisition are modeled separately: traditional bricks-and-mortar stores (B) that sell (mainly) CDs; street vendors (S) that sell counterfeit CDs; digital music stores (D) that sell MP3 files (either just a song or the whole CD as an album); peer-to-peer Internet platforms (P) that allow users to download MP3 files (single songs or the whole album or even whole collections of one artist) without a fee. Channels (B) and (D) are, of course, legal, while channels (S) and (P) are illegal.

The standard TPB relationships have been validated many times previously (Armitage & Conner, 2001) as outlined above but for the sake of completeness are repeated here:

- H<sub>1B,S</sub>:** A more positive attitude toward buying CDs from brick and mortar stores/street vendors will have a positive effect on individuals' behavioral intentions to buy CDs from brick and mortar stores/counterfeit CDs from street vendors.
- H<sub>1D,P</sub>:** A more positive attitude toward downloading from Internet music stores/P2P platforms will have a positive effect on individuals' behavioral intentions to download from Internet music stores/P2P sites.
- H<sub>2B,S</sub>:** A more positive subjective norm concerning buying CDs from brick and mortar stores/street vendors will have a positive effect on individuals' behavioral intentions to buy CDs from brick and mortar stores/counterfeit CDs from street vendors.
- H<sub>2D,P</sub>:** A more positive subjective norm concerning downloading from Internet music stores/P2P platforms will have a positive effect on individuals' behavioral intentions to download from Internet music stores/P2P sites.
- H<sub>3B,S</sub>:** The easier consumers find buying CDs from brick and mortar stores/street vendors and the more they have the means and knowledge to do so, the greater will be their behavioral intentions to buy CDs from brick and mortar stores/counterfeit CDs from street vendors.
- H<sub>3D,P</sub>:** The easier consumers find downloading from Internet music stores/P2P platforms and the more they have the means and knowledge to do so, the greater will be their behavioral intentions to download from Internet music stores/P2P sites.

## Perceived Quality of Music

Music quality is expected to play a pivotal role in music acquisition and issues related to whether the quality of the digital music products is the same, similar, worse or

<sup>3</sup> Deontology refers to the central role of duty and moral obligation in behavior. Teleology refers to the intended outcomes, the aims, or the goals of a certain action.

better than the traditional physical product, will play a role in its consumption. For example, if during compression of the MP3 the file size is decreased, some information will disappear (Gopal et al., 2004).

However, the difference is not only between physical and digital channel, but there is also a need to examine differences that emerge through technology. For example, in physical piracy, the question is whether a counterfeit CD sold from street vendors is of the same quality as the original CD sold in brick-and-mortar stores. Similarly, in terms of digital piracy, issues such as viruses or corrupted files, might differentiate the digital product. So people might consider the MP3 file from a well-respected Internet music shop to be better (i.e., pollution free) than that of a peer-to-peer Web site. Thus, the quality of music may affect the acquisition of music of all channels.

Kotler and Keller (2007) offer a construct for quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. The basic product includes core benefits such as packaging and the expected product is the set of conditions and attributes that the buyers expect when they purchase the product (Noel, 2012). More generally, perception of quality can also be influenced by other variables such as online ratings (Gao, Greenwood, Agarwal, & McCullough, 2015).

Music quality can also be influenced by factors such as the recording and audio compression technology (Fazekas & Sandler, 2007; Kowalgin & Gamage, 2002) and is also primarily determined by subjective feelings (Usher, 2007). However, sound quality is one of the most difficult characteristics to measure (Tang, Chen, & Tsai, 2016).

According to Gopal and Sanders (2003), consumers have varying beliefs about the sound quality of digitized music. Many consumers believe that the sound quality of an original CD is superior to that of a compressed digital version (Ang et al., 2001; Fetcherin & Zaugg, 2004). This is because when music is compressed to the MP3 format the audio bit rate falls (Lam & Tan, 2001). Thus, the audio quality of digital music downloaded illegally from the internet may be lower than that of legal downloads or of the original CD, encouraging consumers toward legal physical or digital channels (Bhattacharjee, Gopal, & Sanders, 2003). Furthermore, such downloads can lead to corruption or an incomplete process (Das, 2000). While, Bhattacharjee et al. (2003) and Fetcherin and Zaugg (2004) suggest some cannot discern quality difference between digital and CDS, others are more likely to purchase a CD than download music. Bhattacharjee et al. (2003) reported that the perceived quality of online music had a significant negative impact on music downloading, while Fetcherin and Zaugg (2004) provide evidence that the difference in music quality has a discouraging effect on music downloading. Therefore:

**H<sub>4B,D</sub>:** The lack of perceived quality of pirated music will positively affect individuals' attitudes to

buy CDs from bricks-and-mortar stores and Internet music stores.

**H<sub>4SP</sub>:** The lack of perceived quality of pirated music will negatively affect individuals' attitude to buy counterfeit CDs from street vendors and P2P stores.

## Perceived Benefits of Piracy

According to Yoon (2011), the perceived benefits of piracy have a significant impact on attitude toward digital piracy. The attitude toward acquiring music may be expected to be associated with the act of listening to the music, but may also include other aspects such as issues of collection, time, money, and rarity, which have not been researched extensively. In line with Burkart (2008), record collectors are sensitive in the physical qualities of a cultural object and this guides their acquisition decision. Kim, Allenby, and Rossi (2002) have identified that demand for variety is evident in consumers who might want to have all albums of specific bands, artists, and/or genres they particularly like. This might lead to an increase in physical product acquisition, since some of these consumers consider it preferable to collect all physical products (CDs or Vinyl). It even might lead to an increase in the digital acquisition buying bundles of products or illegally downloading the whole collection of an artist/band from other music collectors in peer-to-peer environments.

There are music consumers that might like to get their hands on rare music that is hard to obtain through traditional channels, which might be easier to obtain from pirated products, either physical (counterfeit CDs) or digital (peer-to-peer files from music collectors in a vast cyber community from all over the world). However, finding rare songs can be an incentive for consumers to pay for a download service (Sinha & Mandel, 2008).

With the growth of peer to peer file sharing due to ease of distribution and duplication, many of these sharing activities breach intellectual property and infringement suits have become more prevalent (Bakos, Brynjolfsson, & Litchman, 1999; Kwong & Park, 2008). Hui and Png (2003) found that the incentive of sharing songs is that they are free despite breaking the law. With sharing of songs consumers have more access to rare music, which is more unobtainable, despite breaking the law.

Belk (2013) presents literature that demonstrates that digital goods are as important to their owner's self-perception as physical goods. What was once a more private aspect of music collection now becomes more public and more of a group practice (Belk, 2013). Shared music also builds a community (Born, 2011) and sharing on sites such as Facebook can create identity (Brown & Shellen, 2006). Plouffe (2008) illustrates the growth and examines the literature on P2P sharing and the swapping of pirated music. Vida, Koklić,

Kukar-Kinney, and Penz (2012) address the risk and benefits of digital pirated products across different countries and both are found to affect piracy intention. Melton (1991) refers to the bootlegging of rare live concerts such as the Beatles where the pirated and counterfeit recordings and CDs were highly desired. Keown (2016) looks at populations of music enthusiasts and sound recording collectors who are keen to purchase soundtracks based on a variety of factors and motivational decisions and the building of communities.

Additionally, there might be utilitarian aspects that have to do with how easy was the acquisition of music in terms of time and money (Sinha & Mandel, 2008). Internet connection speed might allow users to download the songs they like very easily and therefore they might prefer to download music files (legal or illegal) rather than obtain music from the time consuming traditional brick-and-mortar stores. Physical piracy might seem to be an easier channel for consumers since street vendors sometimes wander around popular areas (such as pubs, bars, and coffee shops) “advertising” counterfeit products, saving time for potential consumers. These utilitarian aspects are in line with the attributes of “search effort” and “speed of purchase” presented in multichannel theory (Verhoef, Neslin, & Vroomen, 2007). Thus:

**H<sub>5BD</sub>:** The perceived benefits of piracy will negatively affect individuals’ attitude to buy CDs from bricks-and-mortar stores and Internet music stores.

**H<sub>5SP</sub>:** The perceived benefits of piracy will positively affect individuals’ attitude to buy counterfeit CDs from street vendors and P2P stores.

## Price of Legitimate Music

Economic factors such as price can be the most important determinant in acquiring any product. In Sinha and Mandel’s (2008) research, low price was the most popular response for indicating music acquisition from a legal site. Hence, music acquisition is affected by the prices that are available from the various channels—especially, when there are illegal channels that allow music acquisition to take place with no charges. McCorkle, Reardon, Dalenberg, Pryor, and Wicks (2012) identified price as a key motivational factor in explaining the acquisition of music through illegal downloading. Molteni and Ordanini (2003) conclude that the fact that music is provided for free in peer-to-peer sites is one of the most commonly acknowledged reasons that lead people to illegal music downloading. Bhattacharjee et al. (2003) found a consistent strong positive association between the price of music CDs and the level of music files downloaded illegally. Lesk (2003) provided evidence that suggests the average price of legal music CDs has steadily risen since the late 1990s accompanied by an even greater increase in the number of online music files illegally downloaded. Finally, the price of

legitimate music construct is in line with the attribute “price” in multichannel theory (Verhoef et al., 2007). Therefore,

**H<sub>6B,D</sub>:** The price of legitimate music will negatively affect individuals’ attitude to buy CDs from bricks-and-mortar stores and Internet music stores.

**H<sub>6S,P</sub>:** The price of legitimate music will positively affect individuals’ attitude to buy counterfeit CDs from street vendors and P2P stores.

## Perceived Likelihood of Punishment

The growth of illegal file sharing and downloading may also be perceived as less traceable and identifiable. Consumers feel that the Internet provides online anonymity leading to the perception that the behavior is not punishable and therefore more acceptable (Larsson & Svensson, 2010; Larsson, Svensson, & de Kaminski, 2012, 2013). “Identification is key to law enforcement. Likewise to be identified is key to the protection of privacy and the individual’s integrity, in order to escape regimes of surveillance” (Larsson et al., 2012, p. 261). Anonymity on the Internet, especially in relation to unauthorized file sharing, is described by Hinduja (2008, p. 392) as “[releasing] the participants from traditional constraints on their behavior”, which implies that the impact of regulatory norms is reduced. Larsson, Svensson, de Kaminski, Rönkkö, and Olsson (2012) illustrate that there are conditions that require stronger enforcement in a digital environment and to be aware that there is a growing awareness by consumers of how to become more untraceable (p. 260). Karaganis, Grassmuck, and Renkema (2012) investigated users’ views on appropriate penalties for unauthorized file sharing and countermeasures, such as fines or disconnections. We also show in this study that 20% of 18- to 29-year-old respondents made special efforts to encrypt their traffic, and 7% used tools to hide their IP address online. Woo (2006, p. 964) concluded that network anonymization techniques were common to maintain personal autonomy. This in itself was suggested to cause users to engage in “unauthorized file sharing and underground piracy.”

Relevant to this study, deterrence theory finds most use in criminology, aiming to explain the effect of deterrence against an individual’s desire to commit a crime. According to Blumstein, Cohen, and Nagin (1978) deterrence theory focuses on disincentives or sanctions against committing a deviant act and the consequent effects on deterring others from committing such acts. The principle is that antisocial behavior can be deterred through punishment and/or threat of punishment. Peace, Galletta, and Thong (2003) apply deterrence theory examining whether “punishment certainty” and “punishment severity” will affect attitude toward software piracy, finding a negative effect.

Moore and Dhaliwal (2004) and Moore and Chang (2006) include the PLP together with the fear of legal consequences as possible determinants of the attitude toward software piracy. They conclude that there is a negative relationship for both, however significant only for the second of the two constructs. On the contrary, Wingrove, Korpas, and Weisz (2011) conclude that the desire to avoid punishment is linked with agreement with music piracy laws.

Record companies have taken legal actions against some of the most popular peer-to-peer sites such as Napster (Hall, 2002). However, they soon realized that a range of different strategies was necessary in order to tackle the problem effectively. Some industry groups are even prosecuting individuals who use peer-to-peer sites to obtain copyrighted material (Kirwan & Power, 2013), although this has yet to be shown to substantially reduce the problem and is difficult due to the large number of individuals involved. Nevertheless, since music piracy is an illegal behavior, deterrence theory should help explain the behavioral intentions of individuals. Fear of punishment should reduce the acquisition of music from the two illegal music piracy channels considered in the current study, while the opposite is true for the two legal channels (i.e., if consumers fear punishment for using illegal channels, they are more likely to use legal channels). Finally, this construct is connected with the "risk" attribute of Verhoef et al. (2007) multichannel theory. This leads to:

- H<sub>7B,D</sub>:** The PLP will positively affect individuals' attitude to buy CDs from bricks-and-mortar stores and Internet music stores.
- H<sub>7S,P</sub>:** The PLP will negatively affect individuals' attitude to buy counterfeit CDs from street vendors and P2P stores.

## Idolatry

IDL as defined by the Oxford English Dictionary (OED) can be an "immoderate attachment to or veneration for any person or thing" (OED, n.2.) and is expected to be one of the main antecedents of buying music. Raviv, Bar-Tal, Raviv, and Ben-Horin (1996) examine the idolization of pop singers and conclude that IDL can take the form of modeling and worshipping. Modeling reflects the desire to look like the idol. This includes imitative behavior such as wearing similar clothes, hairstyle, looks, and speech. Worshipping, on the other hand, a form of high appreciation and veneration of an idol, is associated with consumers trying to obtain artifacts related to the idol. Belk (1988) identified that consumers communicate their identities from the material holdings they possess. Thus, individuals who show high IDL behavior, wish to own commodities related to their idols in order to express identification and support. According to Madrigal (2001) identification is an individual's emotional connection or attachment to a sponsored

property. If fans idolize a singer/band, they will enthusiastically gather merchandise related to their idol, which could be an important factor affecting their willingness to buy their idol's music rather than obtaining it illegally.

From an ethical point of view, the attribution of harm influences the consumers' decisions to engage in a behavior that is considered as unethical (Fullerton, Kerch, & Dodge, 1996; Muncy & Vittel, 1992). A consumer is more willing to commit an unethical behavior when he/she thinks that the provider suffers little or no economic harm from the consumer's action. Therefore, consumers who believe that music piracy harms their favorite bands/artists may be less likely to engage in music piracy and therefore buy the product. Prior empirical research fails to support this argument (Levin, Dato-on, & Manolis, 2007).

Notwithstanding that it is clear that music piracy is extensive and reduces the volume of CD sales, compared to what record companies were experiencing in the past, there remain potentially-powerful motivations that encourage people to buy legal music. According to Chiou et al. (2005) and Wang et al. (2009) one of these is IDL. Buying legal CDs instead of downloading or buying counterfeit CDs has a special meaning for those who exhibit high IDL. A copyrighted music CD usually provides not only music, but also higher quality packaging, including photos of the artist/band and/or lyrics. People with high IDL, even if they can obtain a downloaded/counterfeit edition of the CD of their idol they still would like to buy the licensed edition for reasons explained above (Chiou et al., 2005). Therefore:

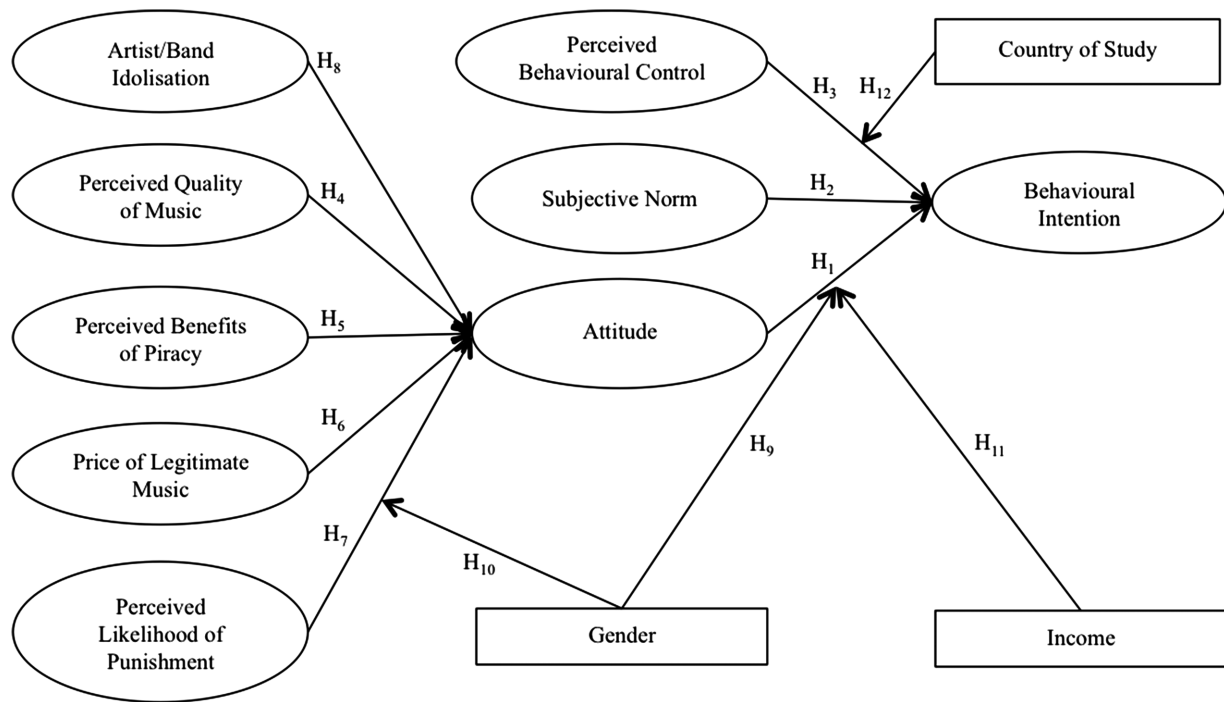
- H<sub>8B,D</sub>:** Higher levels of IDL positively affect an individual's attitude to buy a specific singer's/band's music CD from bricks-and-mortar stores and Internet music stores.
- H<sub>8S,P</sub>:** Higher levels of IDL negatively affect an individual's attitude to buy a specific singer's/band's counterfeit music CD from street vendors and P2P stores.

The extended TPB model for music acquisition from both legal and illegal channels is presented in Figure 1.

## Moderating Variables

**Gender and Income.** Previous research reveals that gender and income affect attitudes and intentions of counterfeit products. Regarding music acquisition, it has been reported that men tend to pirate music more (Coyle, Gould, Gupta, & Gupta, 2009; Wang et al., 2009) and they also buy more music than do women (Sims, Cheng, & Teegen, 1996; Wang et al., 2009). Moreover, research has highlighted that gender has a moderating role on the relationship of punishment with attitude (Morton & Koufteros, 2008). Female students





**Figure 1.** Conceptual model.

risk perception is higher and they respond better to enforcement measures (Chiang & Assane, 2002). Low income on the other hand has been identified as an antecedent of piracy (Coyle et al., 2010).

However, there are studies that conclude that gender and income are not significant. Michaelidou and Christodoulides (2011) found no moderating effects for gender and income on attitude and intentions of experiential counterfeit products, Gopal and Sanders (2003) conclude that income has only nonsignificant results. Al-Rafee and Cronan (2006) find that gender does not play a significant role in the attitude toward digital piracy, while Jafarkarimi, Saadatdoost, Sim, and Hee (2016) reported that gender did not change the impact of their predictors on behavioral intention. On balance, we expect that:

- H<sub>9</sub>:** Gender moderates the relationship between attitude and behavioral intention such that for males the positive effect is stronger than for females for all music channels.
- H<sub>10</sub>:** Gender moderates the relationship between PLP and attitude, such that for males the negative effect is weaker than for females for the two illegal channels.
- H<sub>11</sub>:** Income moderates the relationship between attitude and behavioral intention such that for those with higher income the positive effect will be stronger than those with lower income for the two legal channels.

## METHODOLOGY AND DATA ANALYSIS

To test the hypotheses, a two-stage procedure was adopted. In the first stage, a scale development was performed, utilizing a literature search and consultations with experts. The purpose of this stage was to develop a valid instrument for examining music acquisition from both legal and illegal channels. In the second stage, a quantitative study was conducted, serving three purposes. First, the items generated in the scale development stage are tested for their psychometric properties. Second, the TPB is extended by adding artist/band IDL, PQM, perceived benefits of piracy, price of legitimate music, and PLP into a structural equation model (SEM). Third, variables gender and income are tested for their moderating effects.

Two survey studies took place among university students in the United Kingdom and Greece. University students provide a representative example for this type of research for the following reasons. First, above one-third of the 16–24 age group individuals have taken part in some form of copyright infringement of music (IFPI, 2016). Second, the same age group apparently is the one that consumes the most licensed music. Third, universities provide particular facilities (i.e., high-speed Internet connections in the halls and the university premises) that enable users to engage in this act. Fourth, according to Cheng et al. (1997), university students are considered the most appropriate target population to test digital piracy. Last, 72% of the age group reported that they consider music to be really important for them (IFPI, 2016).

In addition, the United Kingdom and Greece are deemed both important countries for the global music market. The United Kingdom, with US \$21 music revenue per capita (IFPI, 2014)—the second highest in the European Union—a £4.1 billion contribution to the UK economy and a 13.7% of all music consumed globally in 2014, made by British artists (British Phonographic Industry, 2015), is a major global player. Greece, on the other hand, even though a smaller country, its piracy effects on relative music revenue losses are the most pronounced in the European Union (European Union Intellectual Property Office, 2016). Furthermore, it shares many similarities with other southern European countries, such as Italy, Spain, and Portugal.

## Scale Development and Purification Study

The first stage of the analysis involved item development through an extensive literature review. The operationalization of the constructs was based on established scales from the field of consumer behavior, music, and software piracy. The items were adapted with the necessary changes, while in some cases new items were proposed.<sup>4</sup> The initial pool of items obtained from the literature was examined for face validity. First, the researchers sought feedback from two panels of experts in the field of the research. The first panel consisted of five academics with considerable experience in consumer marketing research and the second panel included five music industry practitioners who have worked extensively on the area of music piracy. The experts examined the degree to which each item corresponded to the proposed construct and suggested changes in the wording of some items together with two cases of replacement of the initial items. Also, the experts evaluated and reviewed the initial items and proposed a reduction, suggesting the exclusion of two items. After the proposed alterations, scales including 87 items were constructed. As the purpose of the study was to predict intentions and behavior; examine predictive validity and the relative importance of the variables, direct measures of attitude, subjective norm, and perceived behavioral control were used rather than first eliciting the relevant beliefs (Ajzen, 2006). All items were measured on 7-point Likert-type scales anchored by 1 = strongly disagree and 7 = strongly agree. The multiitem variables could accordingly be treated as measured by interval scales in later processing by covariance-based SEM (Carifio & Perla, 2007).

A self-administered questionnaire was developed as the instrument for this study consisting of three parts and was built around each of the operationalized constructs. After the important definitions, questions 1–5 dealt with the demographics of the participants, while the next five questions (6–10) dealt with their preferences and frequency of acquiring music. Questions 11–81 dealt with items that measured each of the con-

structs. The survey instrument was initially developed in English. However, since the empirical research was conducted both in Greece and the United Kingdom, the questionnaire was translated into Greek using the method of back translation to ensure the absence of linguistic problems (Craig & Douglas, 2000). Immediately after that a pilot study was conducted involving two samples of 10 individuals for each country, in order to ensure the functionality of the questionnaire and that the participants were able to comprehend and fill-in the questions within the proposed time limit. No problems were reported.

Since two of the four channels (illegal street vendors and peer-to-peer platforms) have an illegal nature, the research needed to take a thorough ethical approach when being conducted. In order to ensure that the study was performed in an ethical manner, a formal risk assessment was conducted concerning all aspects of the study (the researcher, the participants, and the university). Questionnaires were distributed in lecture rooms, immediately after the end of the lecture. Student participation was on voluntary basis and they were able to withdraw at any time in order to deal with social desirability bias. Also, anonymity and confidentiality was guaranteed (Grimm, 2010).

The survey used an initial convenience sample of 250 students in order to purify the scales. Of these, 227 were willing to participate, resulting in a response rate of 90.8%. After checking for missing values, 200 usable questionnaires remained for use. For the initial purification, the item-to-total correlations scores were examined and, following standard procedures, all items below 0.5 were dropped from further analysis. This resulted in dropping three items from the initial pool. Then, an exploratory factor analysis (EFA) was conducted in the remaining items using a principal component analysis (PCA) with an Oblimin rotation. After considering the eigenvalues that were greater than 1 and examining the relevant scree plots, all items loaded on to their respective constructs explaining a satisfactory amount of the total variance. Finally, all constructs showed good internal consistency reliability, as evidenced by values of Cronbach's alpha greater than 0.8 in all cases.<sup>5</sup>

## Main Study

Following the purification of the measurement scales, the questionnaire was distributed for the data collection of the main survey. The sample consisted of undergraduate university students of the same two UK and two Greek Universities that participated in the pilot study. This sample ensured the inclusion of participants who engaged in all forms of music acquisition.

One of the major problems in data collection procedures through questionnaires is that of common

<sup>4</sup> Items available from authors upon request.

<sup>5</sup> Tables and results of this analysis are omitted due to economy of space. Tables and results are available from authors upon request.

method bias. According to Podsakoff, MacKenzie, Podsakoff, and Lee (2003), common method bias occurs when data are collected by means of the same questionnaire for measuring all variables (dependent and independent) during the same period of time. Podsakoff et al. (2003) suggest a number of procedural remedies for the design of the study including counterbalancing question order, and protecting respondent anonymity. Therefore, in order to control for common method bias, two different versions of the final questionnaire were compiled with different orders of questions. With this procedure, although the order of the questions changes, the counterbalancing does not disrupt the logical flow and does not create comprehension problems to the participants (Podsakoff et al., 2003). Respondent anonymity and confidentiality was reassured in all stages of data collection.

In total, 650 students were approached in line with specific quotas with regard to country of study and gender. From those 537 completed questionnaires were collected (response rate 82.6%). All questionnaires were screened to identify possible irregularities. Those questionnaires that were partly incomplete and had obvious mistakes were considered as not fit for further analysis (Hair, Black, Babin, & Anderson, 2010). This resulted in 511 usable questionnaires. The data were checked for missing values and missing value patterns. In general, most of the questionnaires were appropriately filled in and only a few variables appeared to have missing values. All missing values were replaced with the median value of the variable.

Regarding the demographic profile of the participants, gender classification showed that females comprised 55% of the total sample size, while males comprised 45%. As expected, most respondents were young (92.4% are 18–23 years old). Also as expected for a student sample, the majority (61.2%) has a monthly income of less than £500, 15.1% has a level between £500 and £700 and only the remaining 23.7% reported income higher than £700. Similarly, the majority (73.6%) were not employed. Regarding piracy rates, nearly 70% of participants download music illegally on a regular basis. From those illegal downloaders, 45% download 1–50 MP3 files per month, while there are 12.4% of participants that are particularly heavy downloaders (more than 100 files per month). There is less physical piracy, specifically, nearly 60% of the participants have not bought a counterfeit CD from street vendors during the last month; 18.8% have bought one CD, 16.2% have bought two CDs, and 5.7% more than three CDs during the last month. Finally, there was a good coverage of all proposed genres.

## RESULTS

### Preliminary Analysis and Model Refinement

After performing preliminary data screening examination (such as outlier analysis, normality, homoscedas-

ticity, and multicollinearity tests) the validity of the construct was assessed through confirmatory factor analysis (CFA). First, the measurement model was used in order to assess the unidimensionality, validity, and reliability of the measures. From these first results,<sup>6</sup> it was observed that although for most cases the fit was considered as acceptable, at the same time it was not very high. This indicated room for further improvement of the results or for model refinement.

Thus, the next step involved the examination of the values of the estimated factor loadings. The results suggested that there were some factor loadings (for items SNP2, PBP2, PBP4, PQM1, PLM1, and IDL2), which had values smaller than 0.5. Therefore, in order to have consistency of the model for all channels, the exclusion of these items was decided. Finally, careful examination of the standardized residual covariances and the squared multiple correlations showed that for all channels, there were problematic values for the IDL3, PLP3, and PBP3 items; and therefore those items were also excluded from the model.

### Validity and Reliability Assessment

After the deletion of these items, the results obtained for the final model suggested that all the goodness of fit indices were improved. More specifically, average variance extracted (AVE) values were greater than the required 0.5 for all constructs and all channels (Table 1). All factor loadings were highly significant ( $p < 0.001$ ) and higher than 0.5 (most higher than 0.7; Hair et al., 2010). Composite reliability (CR) values were higher than 0.6. The square roots of the respective AVEs were greater than the correlations between each pair of factors, indicating sufficient discriminant validity (Fornell & Larcker, 1981; Table 2). Finally, CFA indicated satisfactory fit indices:  $\chi^2 = 907.3$  ( $df = 341$ ),  $\chi^2/df = 2.661$ , GFI = 0.887, AGFI = 0.856, and RMSEA = 0.057 for the bricks-and-mortar channel;  $\chi^2 = 880.115$  ( $df = 341$ ),  $\chi^2/df = 2.581$ , GF = 0.892, AGFI = 0.862, and RMSEA = 0.056 for the Street Vendors channel;  $\chi^2 = 825.19$  ( $df = 341$ ),  $\chi^2/df = 2.42$ , GFI = 0.895, AGFI = 0.865, and RMSEA = 0.053 for the Digital Music Shops Channel; and  $\chi^2 = 1077.29$  ( $df = 341$ ),  $\chi^2/df = 3.159$ , GFI = 0.874, AGFI = 0.839, and RMSEA = 0.056 for the P2P Platforms channel. All constructs met the requirements for construct validation.

### Structural Model

To examine the hypothesized relationships, four distinct SEMs (one for each channel) were estimated using IBM SPSS Amos (Table 3). Diagnostics (bottom of the table) exceed recommended thresholds, indicating satisfactory model fit (Hair et al. 2010). As the research

<sup>6</sup> Tables and results are not reported here for economy of space. Tables and results are available from authors upon request.

**Table 1. Factor Loadings.**

			Bricks		Streets		Digital		P2P	
			$\lambda$	AVE/CR	$\lambda$	AVE/CR	$\lambda$	AVE/CR	$\lambda$	AVE/CR
ATT4	←	ATT	0.772	0.656/0.884	0.838	0.766/0.929	0.838	0.744/0.921	0.836	0.776/0.933
ATT3	←	ATT	0.850		0.901		0.901		0.891	
ATT2	←	ATT	0.786		0.857		0.857		0.833	
ATT1	←	ATT	0.830		0.902		0.902		0.889	
PBC3	←	PBC	0.795	0.639/0.837	0.768	0.636/0.840	0.768	0.737/0.894	0.838	0.888/0.960
PBC2	←	PBC	0.962		0.862		0.862		0.917	
PBC1	←	PBC	0.599		0.759		0.759		0.818	
SN4	←	SN	0.679	0.506/0.754	0.690	0.537/0.681	0.690	0.623/0.831	0.846	0.580/0.695
SN3	←	SN	0.745		0.663		0.663		0.804	
SN1	←	SN	0.708		0.308		0.308		0.711	
INT3	←	INT	0.879	0.765/0.907	0.916	0.846/0.943	0.916	0.777/0.912	0.925	0.833/0.937
INT2	←	INT	0.853		0.933		0.933		0.811	
INT1	←	INT	0.892		0.910		0.910		0.904	
IDL6	←	IDL	0.794	0.636/0.873	0.794	0.635/0.873	0.794	0.636/0.873	0.796	0.635/0.873
IDL5	←	IDL	0.905		0.904		0.904		0.902	
IDL4	←	IDL	0.812		0.815		0.815		0.814	
IDL1	←	IDL	0.659		0.655		0.655		0.658	
PBP6	←	PBP	0.657	0.581/0.803	0.660	0.582/0.804	0.660	0.580/0.803	0.658	0.575/0.800
PBP5	←	PBP	0.884		0.892		0.892		0.881	
PBP1	←	PBP	0.727		0.718		0.718		0.729	
PQM4	←	PQM	0.837	0.585/0.732	0.814	0.583/0.732	0.814	0.578/0.727	0.782	0.581/0.730
PQM3	←	PQM	0.530		0.533		0.533		0.508	
PQM2	←	PQM	0.689		0.709		0.709		0.752	
PLP4	←	PLP	0.493	0.535/0.736	0.478	0.542/0.756	0.478	0.538/0.764	0.488	0.534/0.763
PLP2	←	PLP	0.947		0.982		0.982		0.960	
PLP1	←	PLP	0.682		0.658		0.658		0.673	
PLM4	←	PLM	0.860	0.642/0.837	0.858	0.642/0.837	0.858	0.634/0.837	0.861	0.641/0.837
PLM3	←	PLM	0.943		0.945		0.945		0.942	
PLM2	←	PLM	0.544		0.545		0.545		0.547	

Notes: AVE = average variance extracted; CR = composite reliability;  $\lambda$  = factor loadings; ATT = attitude, PBC = perceived behavioral control; SN = subjective norm; INT = intention; IDL = idolatry; PBP = perceived benefits of piracy; PQM = perceived quality of music; PLP = perceived likelihood of punishment; PLM = price of legitimate music.

goal concerns theory testing and confirmation, the hypotheses are tested using covariance-based SEM (as opposed to PLS-based SEM; Hair et al., 2011; Jöreskog & Wold, 1982), using IBM SPSS Amos. Notwithstanding the univariate normality is mainly satisfactory; departures were observed from the assumption of multivariate normality. Therefore, the results are calculated using the bootstrap procedure and the bias-corrected results reported accordingly (Ichikawa and Konishi, 1995; Nevitt and Hancock, 2001).

For the bricks-and-mortar and Digital Music Shops channels, Attitude (ATT) and Subjective Norm (SN) have significant positive effects on behavioral intention but the effect of perceived behavioral control (PBC) was nonsignificant. This finding supports previous research on channel choice (Pookulangara, Hawley, & Xiao, 2011). With regards to the Street Vendors, ATT and PBC have highly significant effects on behavioral intention, but SN does not seem to play an important role. This is a surprising finding, although it supports the results of past research (Chang, 1998; Cronan & Al-Rafee, 2008). Finally, regarding the P2P Platform channels, all three TPB-associated

constructs are positive and highly significant. This result is in line with other research on music piracy (Morton, & Koufteros, 2008; Wang et al., 2009; Yoon, 2011).

There are separate patterns for the two legal channels compared with the two illegal ones, since only the illegal ones provide significant estimates for PBC (corresponding paths for the legal channels are negative and insignificant). PBC plays an important role for the acquisition of music with regards to the two illegal channels only. Thus, those who can find Street Vendors easily, and those who have the means and the knowledge of illegal music downloading are more prone to engage in music piracy ( $H_1$ ,  $H_2$ ,  $H_{3S}$ , and  $H_{3P}$  supported;  $H_{3B}$  and  $H_{3D}$  rejected) (Table 5).

PQM is highly significant for three channels and marginally significant for street vendors being negative for the two illegal channels and positive for the two legal ones ( $H_4$ ). This finding gives credibility to Bhattacharjee et al. (2003) and Fetcherin and Zaugg (2004). Those who seek better music quality are more prone to acquire music legally, recognizing that copyrighted CDs and legal MP3 files are of better sound quality



**Table 2. Construct Correlations and Average Variance Extracted.**

Panel A: Bricks-and-Mortar (B) Stores Channel									
	ATTB	PBCB	SNB	INTB	IDL	PBP	PQM	PLP	PLM
ATTB	0.810								
PBCB	0.304	0.799							
SNB	0.702	0.318	0.711						
INTB	0.697	0.221	0.637	0.875					
IDL	0.232	0.052	0.196	0.208	0.797				
PBP	−0.124	0.098	−0.189	−0.185	0.052	0.762			
PQM	0.351	0.100	0.382	0.368	0.291	0.007	0.697		
PLP	0.130	0.153	0.155	0.181	0.069	−0.203	0.107	0.731	
PLM	−0.039	0.154	−0.057	−0.170	0.058	0.640	0.044	−0.113	0.801
Panel B: Street Vendors (S) Channel									
	ATTS	PBCS	SNS	INTS	IDL	PBP	PQM	PLP	PLM
ATTS	0.875								
PBCS	0.201	0.798							
SNS	0.296	0.048	0.580						
INTS	0.609	0.276	0.223	0.920					
IDL	−0.024	−0.066	−0.117	0.030	0.797				
PBP	0.016	0.267	−0.076	−0.053	0.050	0.763			
PQM	−0.110	−0.018	−0.174	−0.012	0.297	0.004	0.695		
PLP	−0.069	−0.209	−0.157	−0.041	0.065	−0.192	0.090	0.736	
PLM	−0.095	0.174	−0.006	−0.100	0.057	0.633	0.046	−0.110	0.801
Panel C: Digital Music Shops (D) Channel									
	ATTD	PBCD	SND	INTD	IDL	PBP	PQM	PLP	PLM
ATTD	0.863								
PBCD	0.485	0.859							
SND	0.629	0.400	0.789						
INTD	0.708	0.375	0.659	0.881					
IDL	0.220	0.144	0.225	0.209	0.797				
PBP	−0.158	0.122	−0.177	−0.309	0.052	0.762			
PQM	0.319	0.152	0.321	0.320	0.303	−0.001	0.692		
PLP	0.183	0.106	0.152	0.127	0.068	−0.201	0.109	0.733	
PLM	0.021	0.225	−0.072	−0.141	0.058	0.642	0.041	−0.112	0.802
Panel D: P2P Platforms (P) Channel									
	ATTP	PBCP	SNP	INTP	IDL	PBP	PQM	PLP	PLM
ATTP	0.881								
PBCP	0.559	0.942							
SNP	0.244	0.212	0.693						
INTP	0.731	0.597	0.270	0.913					
IDL	0.079	0.080	−0.054	0.048	0.797				
PBP	0.536	0.593	0.266	0.518	0.054	0.758			
PQM	−0.180	−0.087	−0.084	−0.188	0.300	0.010	0.694		
PLP	−0.063	−0.115	−0.127	−0.092	0.069	−0.209	0.117	0.731	
PLM	0.420	0.411	0.183	0.397	0.059	0.655	0.043	−0.114	0.801

Notes: Square roots of AVEs are presented on the diagonal. Construct correlations are below the diagonal.

ATT = attitude; PBC = perceived behavioral control; SN = subjective norm; INT = intention; IDL = idolatry; PBP = perceived benefits of piracy; PQM = perceived quality of music; PLP = perceived likelihood of punishment PLM = price of legitimate music.

than the respective illegal ones. Similarly, those who seek better sound quality will have a negative attitude toward street vendors and illegal music downloading from P2P platforms.

The paths for PBP are significant for all channels ( $H_5$ ). Those who believe that they benefit from music piracy may tend to have a negative attitude toward bricks-and-mortar stores and digital music shops.

On the other hand, consumers who believe that music piracy has benefits may tend to have a positive attitude toward the two illegal channels. These results support our initial hypotheses and are in agreement with prior research (Yoon, 2011; Vida et al., 2012).

The results are mixed concerning the role of PLM. There is a nonsignificant effect of price for the bricks-and-mortar stores and the P2P platforms ( $H_{6B}$  and  $H_{6P}$

**Table 3. Path Coefficients and *t* Values.**

Path	Bricks-and- Mortar	Street Vendors	Digital Music Shops	P2P Platforms
ATT → INT	0.614 (0.001) <sup>a</sup>	0.569 (0.002) <sup>a</sup>	0.588 (0.002) <sup>a</sup>	0.638 (0.001) <sup>a</sup>
SN → INT	0.457 (0.004) <sup>a</sup>	0.043 (0.454)	0.502 (0.002) <sup>a</sup>	0.089 (0.007) <sup>a</sup>
PBC → INT	−0.021 (0.643)	0.140 (0.002) <sup>a</sup>	−0.009 (0.844)	0.286 (0.002) <sup>a</sup>
PBP → ATT	−0.221 (0.085) <sup>c</sup>	0.121 (0.087) <sup>c</sup>	−0.407 (0.005) <sup>a</sup>	0.820 (0.002) <sup>a</sup>
PQM → ATT	0.388 (0.003) <sup>a</sup>	−0.098 (0.086) <sup>c</sup>	0.355 (0.004) <sup>a</sup>	−0.293 (0.003) <sup>a</sup>
PLP → ATT	0.089 (0.295)	−0.095 (0.246)	0.169 (0.065) <sup>c</sup>	0.166 (0.265)
PLM → ATT	0.052 (0.570)	−0.168 (0.020) <sup>b</sup>	0.250 (0.007) <sup>a</sup>	0.047 (0.680)
IDL → ATT	0.110 (0.036) <sup>b</sup>	0.014 (0.760)	0.116 (0.002) <sup>a</sup>	0.117 (0.021) <sup>b</sup>
Diagnostics and fit statistics				
$\chi^2/\text{df}$	3.178	2.674	2.969	3.233
CFI	0.902	0.926	0.920	0.922
PNFI	0.738	0.761	0.758	0.764
RMSEA (confidence intervals)	0.065 (0.061–0.070)	0.057 (0.053–0.062)	0.062 (0.058–0.067)	0.066 (0.062–0.071)

Notes: All tests are two tailed. Bias-corrected bootstrapped *p* values are reported in parentheses.

ATT = attitude; PBC = perceived behavioral control; SN = subjective norm; INT = intention; IDL = idolatry; PBP = perceived benefits of piracy; PQM = perceived quality of music; PLP = perceived likelihood of punishment; PLM = price of legitimate music.

<sup>a</sup>*p* < 0.01.

<sup>b</sup>*p* < 0.05.

<sup>c</sup>*p* < 0.10.

rejected). This result indicates that people who acquire music from bricks-and mortar stores and from P2P platforms may be little affected by price. Also, for street vendors and digital ( $H_{6S}$  and  $H_{6D}$ ), the hypotheses are rejected since the estimated coefficients suggest a significant inverse relationship from the one expected. This result is surprising and contradicts with prior research. Chiang and Assane (2002), Molteni and Ordanini (2003), and Gopal, Marsden, Lertwachara, and Bhattacharjee (2002) suggest that a rise in the prices of legally acquired music leads to more downloading, while Ang et al. (2001) and Plowman and Goode (2009) suggest that there is a strong negative association between price and downloading. Perhaps this could be explained as follows: It seems that since PLM is non-significant for bricks-and-mortar stores, CD buyers are not affected at all by prices. On the other hand, PLM is positive and significant for the digital channel. This unexpected result possibly reflects the fact that the digital channel enables the consumer to buy specific songs (single tracks) from an album. Therefore, when legal CD prices increase, consumers tend to prefer the digital channel rather than the bricks-and-mortar one where they can buy a single track and be charged less.

The hypothesized negative effect of PLP on the illegal channels and positive effect of PLP on the legal ones ( $H_7$ ) is rejected for three of four channels due to non-significant estimates. However, for digital music shops the hypothesis is supported, since it shows a positive, statistically significant coefficient. This suggests that those who are afraid of being punished tend to use the legal Internet channel in order to acquire music and is in line with current research from Wingrove et al. (2011).

Finally, the relationship between IDL and ATT toward music acquisition for all channels ( $H_8$ ) was also examined. The results for this construct suggest that those who have a strong connection with their music (artists/bands) idols tend to have a positive attitude

toward the two legal music channels. However, with regards to the illegal channels, the relationship was nonsignificant only for the case of street vendors, while the relationship was positive and significant for the P2P platforms. This suggests that consumers with a high degree of IDL do not like illegal CDs (in line with the theoretical prediction), but do tend to download music from P2P platforms (which was not predicted). This was also a surprising result that is in contrast with prior research of Chiou et al. (2005). One possible explanation for this finding is that many musicians/artists nowadays are in favor of “free music for everyone” and encourage their fans to download or listen to their music from the Internet for free.

## Gender and Income

A multigroup analysis tested the moderating effects of music acquisition from various music channels by splitting the initial samples into subsamples according to the values of each individual moderator, the moderators being dichotomous demographic variables. More specifically, the impact of gender and income were examined.<sup>7</sup>

**Gender.** For the case of gender there are two different paths that need to be examined separately. The first path involves the relationship between attitude (ATT) and behavioral intention (INT;  $H_9$ ). The second path involves the relationship between the PLP and attitude (ATT) toward music acquisition ( $H_{10}$ ). The results for the gender moderating effect are presented in Table 4, panel A. Regarding the first path, the estimates in all cases are statistically significant and of the same magnitude for both males and females. However, the  $\Delta\chi^2$

<sup>7</sup> We also examined the moderating effect of the variable country of study where we observed no differences between the UK and Greek students.

**Table 4. Moderations.**

Main Effect	(A) Gender Effect			
	Males	Females	Combined	$\Delta\chi^2$ ( $\Delta df = 1$ )
ATT → INT (bricks)	0.510*	0.579*	0.550*	26.514
ATT → INT (Street)	0.668*	0.479*	0.581*	2.776
ATT → INT (digital)	0.574*	0.483*	0.528*	0.836
ATT → INT (P2P)	0.593*	0.568*	0.577*	0.522
PLP → ATT (Bricks)	0.052	0.024	0.037	0.114
PLP → ATT (street)	−0.074	−0.003	−0.035	0.636
PLP → ATT (digital)	0.036	0.162	0.096	3.225
PLP → ATT (P2P)	0.015	−0.223*	−0.104*	7.732*

	(B) Income Effect			
	Low	High	Combined	$\Delta\chi^2$ ( $\Delta df = 1$ )
ATT → INT (bricks)	0.618*	0.394	0.533*	2.895
ATT → INT (street)	0.639*	0.447*	0.571*	10.96*
ATT → INT (digital)	0.560*	0.458*	0.520*	1.961
ATT → INT (P2P)	0.682*	0.493*	0.856*	5.376*

Notes: ATT = attitude; INT = intention; PLP = perceived likelihood of punishment; PBC = perceived behavioral control.

\* $p < 0.05$ .

**Table 5. Research Questions, Hypotheses and Findings.**

Research Questions	Hypotheses	Outcome			
		B	S	D	P
RQ1: What is the connection between music acquisition attitudes, subjective norm, perceived behavioral control, and intention?	H <sub>1</sub>	S	S	S	S
	H <sub>2</sub>	S	R	S	S
	H <sub>3</sub>	R	S	S	R
RQ2: What is the role of perceived benefits of piracy, price of legitimate music, perceived likelihood of punishment, and idolatry in shaping their music acquisition attitudes?	H <sub>4</sub>	S	S	S	S
	H <sub>5</sub>	S	S	S	S
	H <sub>6</sub>	R	R	R	R
	H <sub>7</sub>	R	R	S	R
	H <sub>8</sub>	S	R	S	R
RQ3: What is the moderating effect of key sociodemographic variables such as gender and income?	H <sub>9</sub>	R	R	R	R
	H <sub>10</sub>	R	S	R	S
	H <sub>11</sub>	R	R	R	S

Notes: S = supported; R = reject.

values for all channel cases are nonsignificant indicating that there is no significant difference in the ATT to INT estimate between males and females supporting prior research of Al-Rafee and Cronan (2006) and Michaelidou and Christodoulides (2011). With regards to the second path, the results for the first three channel cases are nonsignificant for both subgroups with the exception of the last channel (P2P platforms). For this channel there is a strong moderating effect (acceptance of the hypothesis of moderation with  $\Delta\chi^2 = 7.37$  and  $p = < 0.001$ ) regarding the PLP to INT path. More specifically this path was found to be negative and significant for the female group and positive and nonsignificant for the male group. This is in line with prior studies in online music piracy literature (Chiang & Assane, 2002; Morton & Koufteros, 2008) showing that females feel a higher threat of being punished that leads them to less illegal downloading from P2P sites than that of males.

**Income.** The low-income group consisted of 312 (61.2%) participants with income below the median of 500 UK pounds per month and high-income group contained the remaining 199 (38.8%) participants. H<sub>11</sub> examines the relationship between attitude (ATT) and intention (INT) toward music acquisition. The results for these tests are reported in Table 4, panel B. For bricks-and-mortar stores the hypothesis of moderating effect among different income levels is rejected. Regarding the digital music shops the results are similar to the bricks-and-mortar stores. Here, again the conclusion is in favor of the rejection of the hypothesis for existence of moderating effects for the two groups. The ATT to INT path is positive and statistically significant for both groups with no significant difference in the magnitude for low-income compared with high-income individuals. Regarding the street vendors' channel the moderation hypothesis ( $\Delta\chi^2 = 10.96$  and  $p = 0.001$ ) is

supported. Therefore, there is a significant difference in the way low- versus high-income individuals view the situation regarding music acquisition from this channel. The path estimates are positive for both channels, but the estimated coefficient is significantly higher for the low-income compared to the high-income individuals. Although both groups have positive attitudes toward music acquisition from street vendors, those with low-income levels tend to have a more positive attitude than their high-income counterparts. Finally, it is interesting to see that for P2P platforms the result bares strong similarities with that of the other illegal channel (street vendors). The analysis of the ATTP to INTP path suggests acceptance of the moderating effect of income hypothesis ( $\Delta\chi^2 = 5.37$  and  $p = <0.05$ ). The path coefficients are both positive and significant but are significantly higher for the low-income group compared to the high-income group. This result suggests that low-income individuals tend to have a more positive attitude toward music acquisition from the illegal channels and is in line with prior research of Coyle et al. (2010).

## DISCUSSION

In this study, the authors put together in a single model both legal and illegal channels of music acquisition. For the case of Internet music shops, the model had the most hypotheses supported (only perceived behavioral control was rejected), followed by the one of P2P channels (price of legitimate music and PLP were rejected). Regarding the bricks-and-mortar stores and the street vendors, the – two physical channels –the lack of support for the perceived behavior control construct was in line with a previous research on channel choice (Pookulangara et al., 2011), which signifies that caution should be given when TPB is applied in the case of bricks-and-mortar.

## Theoretical Implications

We contribute to the marketing literature in a number of ways in this study. First, we confirmed that the proposed antecedents of attitude are important in order to identify the intentions of consumers' music acquisition. Second, we conceptualized and applied a TPB model in a new context, that of music acquisition from various music channels. The empirical assessment of the model took place in two European countries. The success of the incorporation of additional external factors—specifically related to music—in the TPB model is evident from the results. The results suggest that the proposed extended model of music acquisition in a multichannel framework demonstrates useful explanatory and predictive power.

Third, this research has identified important factors from the extensive literature on various theoretical aspects that can explain the piracy phenomenon such as consumer, ethical, and deterrence theories, the social

identity theory together with economic and technological related factors. Therefore, the model developed for this research makes an important contribution to the current literature that might be applicable to other behaviors and industries that are suffering from a dark side such as piracy, for example, the film or book industries.

Finally, previous studies on the topic of music acquisition used the TPB or extensions of it focusing mainly on the issue of music piracy only. To the best of the authors' knowledge, no research had focused on other possible channels of music acquisition.

## Managerial Implications

The findings of this research study have many managerial implications for the music industry and possibly for other cultural industries that face piracy issues. Following the emergence of advanced compression technologies for storing and transmitting files, the music industry has faced major and unprecedented changes to its structure. The most significant blow, which caused major financial losses has come from the establishment of peer-to-peer transfers as a new way of acquiring music without paying any fee. We in this study shed light on identifying the factors affecting consumers' decisions toward music acquisition from traditional and new, legal and illegal channels, which is necessary and useful for the music industry in order to prioritize resources in an effective way. It has provided useful information and valuable insights that should help the music industry to better identify the needs of music consumers and to tackle appropriately the music piracy problem. The results have identified PQM as the most significant factor impacting on consumers' attitude toward music acquisition for the two legal channels. In addition, PBP was found to exert the most significant influence on consumers' attitudes toward music acquisition for the two illegal channels, street vendors and P2P platforms, respectively. This implies that the industry should pay more attention to and promote the issue of music quality. It is important for consumers to feel that the product acquired legally and with the payment of a fee is something that is clearly better than its equivalent pirated file, which can be freely downloaded, or a counterfeit CD that can be purchased on a lower price. Further, the music industry could provide added-value solutions to the consumers, for example, by satisfying the needs of those who wish to acquire a wider music collection or the whole discography of their favorite artists/bands with the minimum effort (e.g., full discography collection and provision of rare songs/albums). South-east Asian music companies have long used this added-value approach to combat piracy. For example, Japanese artist Gigi Leung's album *Living in 74* was packaged with a dog figurine that was featured in her TV commercials for cosmetics brand "Fanci House" (Chung, 2002). This would have helped to reinforce consumers' attitudes to acquiring music



legally. Furthermore, time (implicit in PBP items) was found to be an important issue as well. Suppliers can make it fast, effortless, and convenient to acquire music legally, as, for example, Amazon facilitates download of tracks (or purchase of CDs) with a single click, which should strengthen consumers' attitudes to acquiring music legally.

Another important managerial implication comes from the fact that IDL was found to have a positive impact for music acquisition across the legal and the P2P channels, most significantly for the Internet music shops channel, followed by the bricks-and-mortar channel. This result suggests that those with high degree of IDL prefer to buy the music of their idols legally. This has important implications for the industry. For example, Argentinian group Soda Stereo's hits compilation *Me Verás Volver* included a password to the band's Web site giving access to exclusive material such as recording of a live concert, photos, and videos (Bitar, 2007). Thus, the artists enhance the IDL by offering supporting music packages.

Contrary to the above, IDL had a positive impact on the illegal acquisition of music through P2P platforms. Although this result seems to contradict the aforementioned results, it does not. The finding shows clearly the power that the artist/band has on its followers since there are many artists nowadays that have abandoned record labels and the music industry route, promoting their music individually and providing their music through the internet for free or following a pay as much as you like approach (e.g., Radiohead), or even encouraging their followers to download their music from illegal channels.

With regards to the PLP, the findings suggest a positive impact for the legal digital channel only. This finding suggests that those who fear punishment tends to avoid illegal downloading in favor of the legal acquisition of MP3s. The nonsignificant result for all other channels suggests that consumers acquire music from these channels irrespective of the fear of being punished. This was evident from the replies that most of the participants provided for the PLP items. The implication is that the music industry has work to do in order to persuade consumers that music downloading is illegal. There is still a large number of individuals who do not consider the piracy of music as an unethical unlawful behavior. Taking legal action against customers is unlikely to win public support and therefore an education approach is preferable.

Finally, the research examined the possible impact on the hypothesized relationships of different demographic factors: gender and income. With respect to gender, the empirical results suggested no major differences between males and females regarding their attitude toward music acquisition for all channels. However, the results suggested that there is a difference between males and females when it comes to the perceived likelihood of punishment specifically for the P2P channel. Since women believe that there is a higher possibility of being prosecuted while engaging on mu-

sic piracy, the music industry's advertising campaigns against piracy will be more effective when targeted for female audiences.

Consumers with lower income levels tend to acquire music illegally more than those with higher income levels. This finding has strong implications for the music industry. It is evident that the income effect of music acquisition is quite large for consumers; and therefore if they have lower incomes they seek to find music from illegal channels, while if they are on the higher income side they do not immediately switch to the legal ones either.

## Policy Implications

The policy implications of this research are twofold. The first concerns the positive attitude associated with music acquisition from all channels (both legal and illegal). There is no widespread belief that piracy is a criminal activity. Policymakers can design programs in order to educate all members of society (family, important others, students) on the ethical aspects of piracy in order to promote the message that piracy, as an illegal activity, is socially undesirable and unethical.

The second is the fact that the deterrence effect of legislation is quite limited in terms of illegal music downloading from P2P sites and will remain so unless people change their opinions about the possibility of being caught and punished by the legal authorities. Tightening regulations, increasing sanctions, and publicizing examples of the imposition of penalties may be called for to change the public belief about the low possibility of punishment.

Importantly, the finding that IDL plays an important role in music acquisition from different channels can be utilized by policymakers to promote antipiracy campaigns using pop/rock music idols as the spokespeople on the bad effects of this criminal activity.

## LIMITATIONS AND FUTURE RESEARCH

The first limitation relates to the sample used in the quantitative analysis. Because of the nature of this study, a population frame cannot be achieved since it is necessary to ensure participants anonymity and confidentiality. Therefore, the application of probability sampling techniques that eliminates biases cannot be obtained. Thus, the study in an attempt to eliminate sampling error adopts a convenience sampling technique asking all participants to fill-in the questionnaire a few minutes before or after a certain lecture/class. Also, particular effort is made to ensure that the sample selection will not be formed on the basis of any judgment.

Second a potential limitation could be that the unit of analysis was entirely on university students. Although most previous research suggests that university students are an appropriate sample for such studies, music acquisition is a common behavior for other society members as well. Therefore, a study extending the

sample frame beyond university students might provide different results. For example, according to Karaganis et al. (2012) adolescents might be an appropriate sample since they are very active online.

The research took place on a limited population of two United Kingdom and two Greek universities. This usefully compares two European countries with different piracy level characteristics, but an extended study gathering data from more countries and a larger group of universities might provide a further improvement. Also, the findings of this study are limited to the European context and may not necessarily reflect music acquisition levels in countries outside Europe. Replicating the current research in other countries will help the generalizability of the findings.

Future research can be directed toward other industry settings that share similar characteristics to music acquisition. These involve cultural industries that suffer from the piracy phenomenon such as the film and book industries. Researchers should examine the extent to which the constructs and relationships of the current study are matched in different industry contexts (Craig & Douglas, 2000).

Since this study has been conducted in the United Kingdom and Greece, two European countries, future research should examine the applicability and equivalence of the constructs and their measures when applied in different cultural settings, such as different countries and industries. Cultural differences may influence music acquisition from various channels for different country settings.

Market segmentation is considered to be essential for planning marketing communications (see, e.g., Bailey, Baines, Wilson, & Clark, 2009). Future research should examine music acquisition from multiple music channels for different segments of the participants to differentiate the participants on various levels. One level has to do with whether the participants prefer the physical or the digital form of the product, thus segmenting them into “non-downloaders” versus “downloaders.” A different level can be viewed with regards to the legal versus the illegal (pirated) acquisition of music segmenting the participants to various levels ranging from the “strong pirates” to those who acquire music legally only. This issue is investigated for the DVD industry by Cockrill and Goode (2012). Finally, segmentation can be applied to the various music preferences of the participants since it is believed that different music genre listeners have different attitudes toward music acquisition (Dilmeri, King, & Dennis, 2011). The impact of other moderators such as age should also be examined. Future studies can identify whether there are differences in behavior among same individuals in different periods of their life. Ideally, these examinations might require longitudinal studies.

Additionally, a future qualitative study could be conducted in order to add depth and color, for example, to the mixed results on the role of price.

Finally, although the current study innovates in the sense of applying the theoretical model in a multiple

channel context, research could be extended to other channels, for example, streaming services such as Spotify, Apple Music, and Pandora. Since technology is evolving rapidly, the emergence of other channels that may lead to changes in the way people acquire music is likely. Accordingly, ongoing research on this topic is called for.

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